

AMENDMENTS TO THE CLAIMS

Claim 1 (Previously Presented): A resin-coated hot dip galvanized steel sheet superior in weldability and corrosion resistance comprising:

a hot dip galvanized steel sheet; and

a resin film formed directly on a surface of said hot dip galvanized steel sheet, said resin film comprising:

a polyolefin copolymer resin molecular-associated by ion cluster;

10 to less than 55 mass % of silica particles in terms of solids content;

1 to 8 mass % of a first crosslinking agent in terms of solids content; and

1 to 8 mass % of at least one of tannic acid and ammonium vanadate in terms of solids content.

Claim 2 (Previously Presented): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein said polyolefin copolymer resin molecular-associated by ion cluster is prepared by ionomerizing an olefin-ethylenically unsaturated carboxylic acid copolymer resin, which comprises 1 to 40 mass % of an ethylenically unsaturated carboxylic acid, and by making the resulting ionomer high in molecular weight with use of a second crosslinking agent.

Claim 3 (Original): The resin-coated hot dip galvanized steel sheet according to claim 2, wherein said olefin is at least one member selected from ethylene and styrene.

Claim 4 (Original): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein said resin film is formed on the steel sheet surface in an amount of 0.1 to 1.5 g/m² in terms of a dry weight.

Claim 5 (Original): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein said silica particles have an average particle diameter of 1 to 9 nm.

Claim 6 (Original): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein the surface of said hot dip galvanized steel sheet is subjected to skin pass rolling of 0.01% or more in terms of elongation percentage.

Claim 7 (Original): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein a center line average roughness Ra at the surface of said hot dip galvanized steel sheet is in the range of 0.1 to 2.0 μm .

Claim 8 (Canceled)

Claim 9 (Previously Presented): A method for producing a resin-coated hot dip galvanized steel sheet superior in weldability and corrosion resistance, said method comprising:

applying an aqueous resin coating material directly to a surface of a hot dip galvanized steel sheet;

heating said hot dip galvanized steel sheet to dry said aqueous resin coating material;
and

allowing a resin film to be formed on the surface of the hot dip galvanized steel sheet,
wherein said aqueous resin coating material comprises emulsion of a polyolefin copolymer resin molecular-associated by ion cluster, 10 to less than 55 mass % of silica particles in terms of solids content, 1 to 8 mass % of a crosslinking agent in terms of solids content, and 1 to 8 mass % of at least one of tannic acid and ammonium vanadate in terms of solids content.

Claim 10 (Currently Amended): The method ~~for producing a resin-coated hot dip galvanized steel sheet~~ according to claim 9, wherein said polyolefin copolymer resin emulsion molecular-associated by ion cluster is neutralized with an amine.

Claim 11 (New): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein said resin film comprises 1 to 8 mass % of ammonium vanadate in terms of solids content.

Claim 12 (New): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein said resin film comprises 1 to 8 mass % of tannic acid in terms of solids content.

Claim 13 (New): The resin-coated hot dip galvanized steel sheet according to claim 1, wherein said resin film consists of:

- a polyolefin copolymer resin molecular-associated by ion cluster;
- 10 to less than 55 mass % of silica particles in terms of solids content;
- 1 to 8 mass % of a first crosslinking agent in terms of solids content; and
- 1 to 8 mass % of at least one of tannic acid and ammonium vanadate in terms of solids.

Claim 14 (New): The method according to claim 9, wherein said aqueous resin coating material comprises 1 to 8 mass % of ammonium vanadate in terms of solids content.

Claim 15 (New): The method according to claim 9, wherein said aqueous resin coating material comprises 1 to 8 mass % of tannic acid in terms of solids content.

Claim 16 (New): A method of producing a coated steel sheet, the method comprising coating on a hot dip galvanized steel sheet a resin film comprising:

- a polyolefin copolymer resin molecular-associated by ion cluster,
- 10 to less than 55 mass % of silica particles in terms of solids content,
- 1 to 8 mass % of a first crosslinking agent in terms of solids content, and
- 1 to 8 mass % of at least one of tannic acid and ammonium vanadate in terms of solids; and

producing the resin-coated hot dip galvanized steel sheet of claim 1.

Claim 17 (New): A method of producing a coated steel sheet, the method comprising coating on a hot dip galvanized steel sheet a resin film consisting of:

a polyolefin copolymer resin molecular-associated by ion cluster,

10 to less than 55 mass % of silica particles in terms of solids content,

1 to 8 mass % of a first crosslinking agent in terms of solids content, and

1 to 8 mass % of at least one of tannic acid and ammonium vanadate in terms

of solids; and

producing the resin-coated hot dip galvanized steel sheet of claim 13.